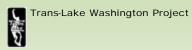


Environmental Findings

Built Environment



Parklands

Bob Swope, CH2M HILL



Protective Regulations

• Section 4(f) of the U.S. Department of Transportation Act of 1966

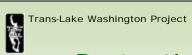
- applies to public parks, recreation areas and trails, wildlife and waterfowl refuges, and historic sites
- requires that the use of these resources can only be approved
 - there are no feasible and prudent avoidance alternatives
 - the project includes all possible planning to minimize
- impacts are either direct (property acquisition) or proximity (increased noise, degradation of the visual setting, or access restrictions)



Trans-Lake Washington Project

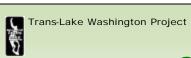
Protective Regulations

- City of Seattle Ordinance 118477 (1997)
 - specifies that all lands and facilities held now or in the future by the City for parks and recreational purposes must be preserved for such use
 - requires that 'no such land or facilities can be sold, transferred, or changed from park use unless the City receives in exchange land or a facility of equivalent or better size, value, location, and usefulness in the vicinity' (serving the same community)



Protective Regulations

- Olmsted Plan for Seattle's Parks, Boulevards, and Playgrounds
 - applies to Washington Park/Arboretum
 - heightens the historic and cultural significance of these resources / close scrutiny by Friends of Seattle's Olmsted Parks
 - City's Parks and Recreation COMPLAN recommends that Olmsted Parks be designated for special consideration as Park Historic Resource Areas



Seattle

				Alteri	native			
	1	2	3	4	5	6	7	8
Direct Impact		Meas	ured in 9	% of tota	al park a	rea (if k	nown)	
I-5 Open Space	-	-	-	Χ	-	-	Χ	Χ
10 th Ave E & E Roanoke	-	-	31.0	31.0	12.0	24.0	51.0	51.0
Bagley Viewpoint	-	5.0	30.0	75.0	30.0	23.0	100.0	100.0
Montlake Bike Path	-	-	Χ	Χ	Χ	Χ	Χ	Χ
McCurdy Park	-	38.0	100.0	100.0	100.0	100.0	100.0	100.0
East Montlake Park	-	3.0	17.0	20.0	4.0	12.0	12.0	23.0
Washington Park /Arboretum	-	1.1	0.4	1.0	0.9	1.5	0.5	0.7
TOTAL PARKS IMPACTED	0	4	6	7	6	6	7	7



Medina to I-405

Λ	lŧ۵	rn	at	ive

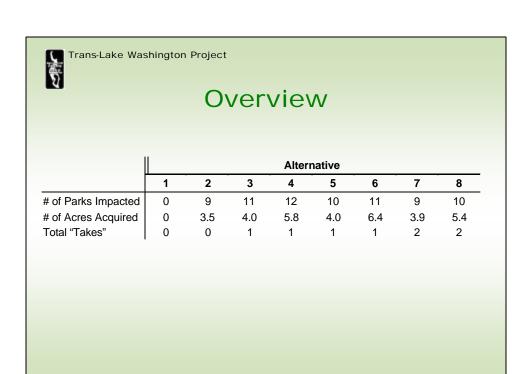
	1	2	3	4	5	6	7	8
Direct Impact		Mea	sured in	% of tota	l park aı	ea (if kno	wn)	
Fairweather Nature Preserve	-	1.0	1.0	2.0	-	3.5	-	3.0
Points Loop Trail	-	Χ	Χ	Χ	Χ	Χ	Х	Χ
TOTAL PARKS	0	2	2	2	1	2	1	2

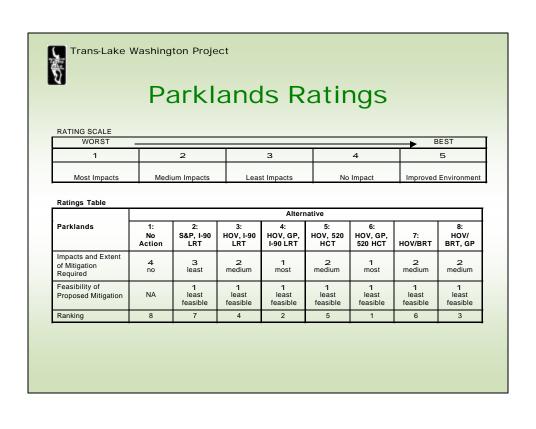


Trans-Lake Washington Project

I-405 to Redmond

				Alter	native			
	1	2	3	4	5	6	7	8
Direct Impact		Meas	ured in ⁹	% of tota	al park a	rea (if kı	nown)	
SR 520 Trail	-	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Sammamish River Park and Trail	-	Х	Х	Х	Х	Χ	-	-
Town Center Trail and Open Space	-	Х	Х	Х	Х	Х	-	-
TOTAL PARKS IMPACTED	0	3	3	3	3	3	1	1







Displacements

Lorie Parker, CH2M HILL



Trans-Lake Washington Project

Seattle

Structures Potentially Displaced

		Alternative											
Existing Land Use	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT	6: HOV, GP, 520 HCT	7: HOV/ BRT	8: HOV/ BRT, GP					
Multi-family							3	5					
Single-family						1	3	3					
Commercial		1	1	4	14	14	12	12					
Industrial					8	8	9	9					
Public		2	2	2	2	2	2	2					
TOTAL		3	3	6	24	25	29	31					



Medina to I-405

Structures Potentially Displaced

				Alterr	native			
Existing Land Use	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT	6: HOV, GP, 520 HCT	7: HOV/ BT	8: HOV/ BRT, GP
Multi-family								
Single-family		2	3	3	5	5	3	2
Commercial			6	12	8	11	6	12
Industrial				1		1		1
Public								
TOTAL	0	2	9	16	13	17	9	15



Trans-Lake Washington Project

I-405 to Redmond

Structures Potentially Displaced

				Alter	native			
Existing Land Use	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT	6: HOV, GP, 520 HCT	7: HOV/ BRT	8: HOV/ BRT, GP
Multi-family								
Single-family								
Commercial		5	6	6	4	5		1
Industrial		3	3	3	2	2		
Public								
TOTAL	0	8	9	9	6	7	0	1



I-90 to SR 520

Structures Potentially Displaced

				Alterr	native			
Existing Land Use	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT	6: HOV, GP, 520 HCT	7: HOV/ BRT	8: HOV/ BRT, GP
Multi-family								
Single-family		3	3	3				
Commercial								
Industrial								
Public								
TOTAL	0	3	3	3	0	0	0	0



Trans-Lake Washington Project

Summary

Structures Potentially Displaced

				Alterr	native			
Existing Land Use	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT	6: HOV, GP, 520 HCT	7: HOV/ BRT	8: HOV/ BRT, GP
Seattle	0	3	3	7	24	25	29	31
Medina to I- 405	0	2	9	16	13	17	9	15
I-405 to Redmond	0	8	9	9	6	7	0	1
I-90 Corridor/ Bellevue	0	3	3	3	0	0	0	0
TOTAL	0	16	24	35	43	49	38	47



	RATING SCALE				
	WORST _				BEST
Γ	1	2	3	4	5
	Most Impacts	Medium Impacts	Least Impacts	No Impact	Improved Environment

	Alternative									
Displacements and Disruption	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT	6: HOV, GP, 520 HCT	7: HOV/BRT	8: HOV/ BRT, GP		
Impacts and Extent of Mitigation Required	4 no	3 least	2 medium	2 medium	2 medium	1 most	2 medium	1 most		
Feasibility of Proposed Mitigation	NA	1 least feasible	1 least feasible	1 least feasible	1 least feasible	1 least feasible	1 least feasible	1 least feasible		
Ranking	8	7	6	5	3	1	4	2		



Land Use

Comparison of Estimated Direct Land Use Impacts in Acres^a

				Alte	rnatives			
Existing Land Use Type	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT	6: HOV, GP, 520 HCT	7: HOV/BRT	8: HOV/ BRT, GP
Single-Family Residential	0.0	2.7	3.8	6.8	2.7	4.2	3.3	5.8
Multi-Family Residential	0.0	0.1	0.3	1.1	0.7	0.5	1.1	1.4
Commercial	0.0	8.9	13.5	24.4	18.9	26.6	7.3	18.4
Industrial	0.0	2.9	4.6	7.6	6.4	9.1	1.4	4.5
Public b	0.0	11.7	18.6	19.0	23.6	26.2	14.8	16.5
Other	0.0	0.2	0.4	0.7	0.2	0.7	0.2	0.8
Vacant	0.0	6.9	11.6	13.7	14.9	19.6	8.8	10.1
Total	0.0	33.4	52.8	73.0	67.4	86.9	36.9	57.5
Percent Outside SR 520 Corridor		45%	28%	21%	36%	28%	0	0

^a Acreage is shown to the tenth place by land use in order to show a complete range of potential impacts; however, these numbers only represent gross estimates based on potential alignments, and will be further refined in the EIS phase.

b Public includes all lands that are publicly owned, such as parks, universities, government land, etc.
c Other includes religious institutions.

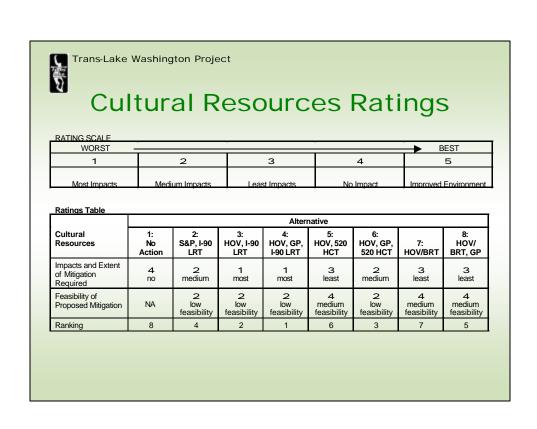


Cultural Resources								
Potential Impacts	Alternative							
	1: No Action	2: S&P, I-90 LRT	3: HOV, I-90 LRT	4: HOV, GP, I-90 LRT	5: HOV, 520 HCT		7: HOV/BRT	8: HOV/ BRT, G
SR 520 Corridor Impacts	•		•		•			
Seward School				Х		Х		
Arboretum Sewage Trestle					Х	Х	Х	Х
Montlake Bridge			Х		Х	Х	Х	Х
Outside SR 520 Corridor Impacts (HCT Only)	•	•	•		•			
Mount Baker Ridge Tunnel	•	Х	Х	Х	•			
Pioneer Square Historic District		Х	Х	Х				
Frederick W. Winters House		Х	Х	Х				
Total Potential Number of Cultural Resources Impacted	0	3	4	4	2	3	2	2



Cultural Resources

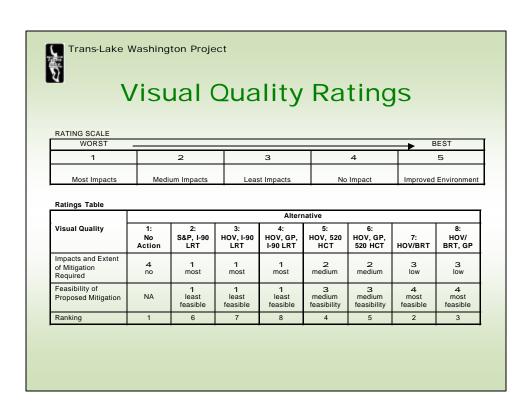
- Includes potential direct and proximity impacts
- Many impacts likely avoided during more detailed design in EIS
- Remaining impacts likely "no adverse effect" Section 106 determination
- Impacts require Section 4(f) Evaluation





Visual Quality

- Most impacts from alternatives establishing new corridors (HCT)
- Widening existing corridors less impact than establishing new corridors
- Reworking surface streets at interchanges moderate to high impacts





Air Quality

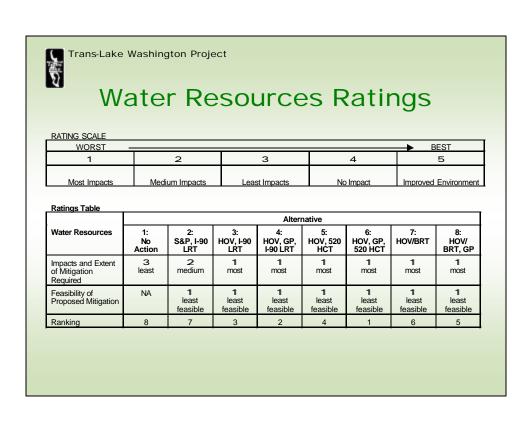
- Increased miles traveled with GP alternatives (Alternatives 4, 6, and 8) causes most impact
- Differences in overall impacts between alternatives are small
- May be different localized impacts to be analyzed in EIS





Water Resources

- Wider footprint alternatives create more impervious surface area
- More impervious surface area requires greater volumes of stormwater detention and treatment





Summary

- Least impacts Alternative 2: Safety & Preservation, I-90 LRT
- Second least impacts Alternative 7: SR 520 HOV/BRT
- Most impacts Alternative 6: SR 520 HOV/GP, SR 520 HCT